Availability and Display of FROZEN FOODS in RETAIL STORES in Washington, D. C.

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This study of retailing frozen foods was made possible through the cooperation of the sample store operators. The study was conducted under the supervision of H. W. Bitting, Agricultural Economist, Agricultural Marketing Service. Henry T. Badger, Agricultural Economist, AMS, assisted in collecting the data. The study was carried out under authority of the Agricultural Marketing Act of 1946 (RMA, Title II).

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Summary

In this study of the availability and display of frozen foods in retail stores, there were 153 different items of frozen food (including pet food) on sale in the 27 sample stores surveyed in Washington, D. C. Of these foods, only 21 were carried by all stores in the sample. These items were:

baby lima beans	mixed vegetables	lemonade
fordhook lima beans	okra	limeade
green beans	green peas	orange juice
broccoli	spinach	beef sandwich steaks
cauliflower	succotash	french-fried potatoes
cut corn	strawberries	prepared shrimp
kale	grape juice	chopped horsemeat

For the 6-week period of the study, sales ranged from $0.49 to $1.46 per square inch of display space among 8 categories of frozen foods. Concentrates brought the highest return of any category followed by meats, prepared foods, vegetables, poultry, fruit, seafoods, and pet food, in that order.

There appeared to be a need for better display cases and additional storage facilities, particularly in the smaller stores. However, in many cases, better use could be made of present equipment before considering new or increased facilities. A new display case is not the solution to a disorderly arrangement. There were enough stores, scattered throughout the sample, that gave continuous attention to their frozen food displays to indicate that frozen food sales in many stores could be increased without additional equipment. Of four factors tested, condition of display (orderliness, price marking, frosted packages, and damaged packages) had the most important effect on frozen food sales. The analysis also included the number of items displayed, the percent of unoccupied cabinet space, and the percent of total display space allocated to the 10 best-selling items.

The larger stores had greater dollar sales of frozen food per unit of display space and also had relatively more of their total floor space devoted to frozen foods. Sales of all frozen foods for the 6-week period averaged $0.27 per square inch of display space in the small stores

(annual sales of $75,000 to $199,999), $0.39 in the medium stores (annual sales of $200,000 to $499,999), and $1.00 per square inch in the large stores (annual sales of over $500,000). Stores in the small group averaged 14.0 square feet of display space, compared to 22.6 in the medium stores and 57.5 in the large stores.

The 153 frozen foods on sale in the sample stores included 24 vegetables, 11 fruits, 12 concentrates, 21 seafoods, 8 items of poultry, 14 meats, 62 prepared foods (such as french-fried potatoes, breaded shrimp, etc.) and 1 pet food. The number of commodities on sale in a single store ranged from 36 to 103, averaging 57 in the small stores, 70 in the medium stores, and 79 in the large stores.

Frozen vegetables occupied 36.3 percent of the cabinet space, concentrates 18.0 percent, prepared foods 17.2 percent, seafood, 10.2 percent, fruits 6.0 percent, poultry 3.6 percent, meats 3.4 percent, and pet foods 1.5 percent. Unoccupied space averaged 3.8 percent for all stores (based on display area covered regardless of the depth of display).

Concentrates accounted for 33.3 percent of all frozen food sales, frozen vegetables 31.9 percent, prepared foods 15.4 percent, seafood 7.2 percent, fruits 4.3 percent, meats 4.0 percent, poultry 3.0 percent, and pet foods 0.9 percent.

The growing importance of prepared foods was demonstrated by the fact that this group ranked first in number of items available and third in both display space and sales.

The 10 best-selling commodities in the sample stores occupied 38.2 percent of the display space and accounted for 58.4 percent of all frozen food sales. These commodities were concentrated orange juice, lima beans, concentrated lemonade, green peas, broccoli, green beans, beef sandwich steaks, concentrated grape juice, spinach, and french-fried potatoes.

The large stores devoted over twice the proportion of space to sea foods (12.2 percent) as did the other two groups of stores. Seafood sales accounted for 7.7 percent of total sales in the large stores, 5.3 percent in the small stores, and 3.7 percent in the medium stores.

Poultry sales were relatively more important in the small stores, accounting for 8.5 percent of sales and 6.2 percent of the total display space. This was about three times the percentage of sales and nearly twice the percentage of space devoted to poultry in the medium and large stores.

Meats also were relatively more important in the small stores, accounting for 9.0 percent of their sales while occupying only 4.8 percent of their display space. Meat sales and space were both around 3.0 percent in the medium and large stores.

Retail prices were compared for equivalent amounts of six fresh, frozen, and canned vegetables. These were peas, lima beans, green beans, cut corn, spinach, and broccoli. The price of frozen peas was considerably less than that of fresh peas and was comparable to the price of the canned product for an equivalent amount. The price of frozen spinach was lower than that of either the canned or fresh spinach. Fresh lima beans, green beans, and broccoli sold at a lower price than either the canned or the frozen product. Whole kernel corn was the only canned item selling at a noticeably lower price than its fresh or frozen equivalent.

Many stores did not stock several of the fresh vegetables although they were in season and readily available. Less than one-third of the stores stocked fresh peas, lima beans, spinach or broccoli. The 6 frozen and canned items (except broccoli, which is not usually canned) were available in nearly all the stores.

AVAILABILITY AND DISPLAY OF FROZEN FOODS IN RETAIL STORES IN WASHINGTON, D. C.

By Dehard B. Johnson, Agricultural Economist

Introduction

The rapid growth of the frozen food industry in recent years and the likelihood of continued expansion have introduced many marketing problems. Facilities for handling, storing, transporting, and displaying frozen foods have not always been adequate to provide for the increased volume. Frozen food processors and wholesalers sometimes regard the limited display space provided in retail stores as a bottleneck to the expansion of frozen food sales. Retailers counter these claims by stating that space is always at a premium in a retail grocery store and that frozen foods account for only a small part of total sales.

In view of the interest shown in the retail handling and merchandising of frozen foods, this study was undertaken (1) to give a basis for judging the availability of the various frozen food products sold in retail stores, (2) to determine the relationship between display space and dollar volume of sales for the various items offered, and (3) to compare retail prices of selected fresh, frozen, and canned products.

The study reported here is a part of a broader program to appraise the potential market for frozen foods. 1/ It is based upon a probability sample of chain and independent stores in Washington, D. C., which handled frozen foods and had annual sales of over $75,000. Complete information was obtained on the dollar sales for each frozen item handled during a six-week period from August 3 through September 12, 1953. The display space occupied by each item was measured at equal

1/ A recent report entitled, "Purchases of Frozen and Canned Foods by Urban Families as Related to Home Refrigeration Facilities," by H. W. Bitting, Marketing Research Report No. 60, is the first report of the series on frozen foods. Surveys are currently under way on the use of frozen foods by ice cream manufacturers, preserve manufacturers, pie bakers, and restaurants and cafeterias.

Table 1.- Total and frozen food floor space and value of frozen food sales in retail stores, Washington, D. C., Aug. 3-Sept. 12, 1953

Group and store number	Floor space: Total	Floor space: Frozen food	Floor space: Frozen as a percentage of total	Frozen food sales
	Square feet	Square feet	Percent	Dollars
Small				
1	590	33	5.6	278.04
2	625	34	5.4	320.15
3	650	50	7.7	834.75
4	840	67	8.0	406.79
5	1,320	33	2.5	1,049.72
6	2,400	48	2.0	312.65
7	4,225	41	1.0	453.28
8	4,400	99	2.3	719.58
Average	1,881	50	2.7	546.78
Medium				
9	1,496	51	3.4	1,004.09
10	1,520	39	2.6	677.74
11	1,700	83	4.9	889.09
12	1,805	99	5.5	1,472.99
13	1,932	66	3.4	1,064.22
14	2,700	74	2.7	2,777.65
15	2,700	87	3.2	889.95
16	2,755	101	3.7	1,372.50
Average	2,076	75	3.6	1,268.54
Large				
17	3,300	241	7.3	7,224.36
18	3,976	175	4.4	8,551.11
19	3,995	143	3.6	8,177.53
20	4,464	126	2.8	3,439.34
21	4,550	169	3.7	6,922.61
22	5,000	236	4.7	8,205.14
23	5,400	258	4.8	13,621.55
24	5,700	228	4.0	6,555.65
25	8,505	194	2.3	11,741.43
26	8,740	203	2.3	5,970.43
27	8,884	304	3.4	10,636.06
Average	5,683	207	3.6	8,276.84
Average all stores	3,488	121	3.5	3,909.94

intervals four times during the six-week period. Records were kept on price changes and numbers of packages sold at each price. Frequent observations were made of the condition of frozen food displays and promotional practices. Expected seasonal variations in sales of some items were not brought out in the limited period of these observations. Such factors as store location, type of clientele, and the elusive attributes of management, unfortunately, could not be measured.

Description of sample stores

This report is based on frozen food sales in 27 chain and independent stores located throughout Washington, D. C. They were divided into three size groups based on 1952 total store sales. The groups and the number of stores in each were:

Size group	Number of stores	Gross sales in 1952
small	8	$75,000 to $199,999
medium	8	$200,000 to $499,999
large	11	$500,000 or over

A random sample of stores was drawn from a list of all stores in the city that handled frozen food and did an annual business of $75,000 or more. Sample stores were then divided into three size groups. The large group consisted entirely of chain stores. One store in the medium group was a chain. All others in the sample were independently managed.

The total selling space varied from 590 to 8,884 square feet in the stores studied. Stores are listed in ascending order of area of floor space within each size group (table 1). The stores in the small group had a greater variation in area of floor space than those in either the medium or large group--two of them had more floor space than some of the stores in the large group. The floor space devoted to frozen foods varied from 1.0 to 8.0 percent, averaging 2.7 percent in the small stores and 3.6 percent in the medium and large stores. Since total sales for each store were obtained only by the categories shown above, it was not possible to determine frozen food sales as a percentage of total sales.

Findings

Availability of frozen foods

There were 153 different commodities on sale in the sample stores during the 6-week period (appendix table 8). These were divided as follows: 24 vegetables, 12 concentrates, 62 prepared foods, 21 seafoods, 11 fruits, 8 items of poultry, 14 meats, and 1 pet food. The number on sale in a single store varied from 36 to 103, averaging 70 commodities for all stores. The small stores displayed an average of 57 commodities, the medium stores 70, and the large stores 79. These differences were largely the result of differences in the seafood and prepared food categories.

There was an average of 20 vegetables, 8 concentrates, 20 prepared foods, 9 seafoods, 5 fruits, 4 items of poultry, 3 meats. and 1 pet food available for sale (table 2). An average of 6 seafood was available in the small stores, 7 in the medium stores, and 13 in the large stores. Prepared foods averaged 14 in the small stores, 22 in the medium stores, and 23 in the large stores. There was little difference among store groups in the number of commodities available in the other categories.

Table 2.- Average number of frozen foods on sale by retail store groups and commodity groups, Washington, D. C., Aug. 3-Sept. 12, 1953

Store group average	Vegetables	Concentrates	Prepared foods	Seafood	Fruit	Poultry	Meat	Pet food	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Small	18	6	14	6	4	5	3	1	57
Medium	20	9	22	7	5	3	3	1	70
Large	20	8	23	13	6	5	3	1	79
All stores	20	8	20	9	5	4	3	1	70

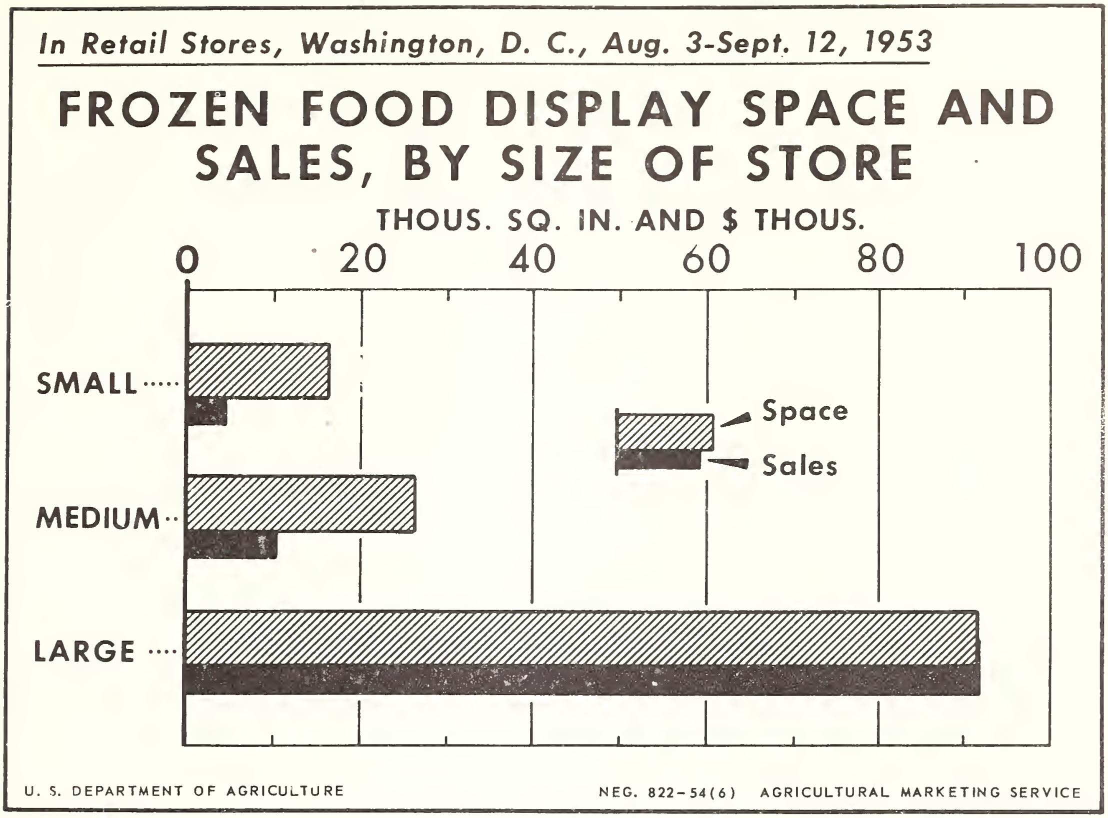
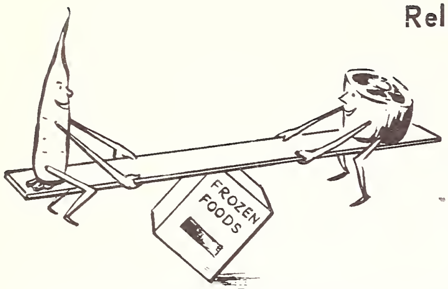


Figure 1.

The number of brands of each commodity on sale in a single store varied from one to six. Some of the stores having high sales volume in each of the size groups carried only a single line of vegetables while other stores carried two or three brands of the important vegetables. Most stores had three or four brands of frozen concentrated orange juice. Few stores carried more than one brand in the other categories with the exception of seafood. A few of the stores in the large size group carried more than one brand of several items of seafood. The number of brands on sale and the dollar sales per square inch of display space are given for six major commodities in appendix table 10.

Relationship of display space to sales



During the 6 weeks, frozen food sales averaged $0.79 per square inch of display space for all stores. Gross returns averaged $1.00 per square inch in the large stores, $0.39 in the medium stores, and $0.27 in the small stores. The large stores had over twice as much display space devoted to frozen foods as did the medium stores and four times as much as the small stores (fig. 1).

All frozen foods in the sample stores were divided into 8 categories to facilitate analysis. These are vegetables, concentrates, prepared foods, seafoods , fruits, poultry, meats, and pet foods. 2/ An allocation was also made for empty space when it was observed.

2/ In several stores there were items such as turkeys and bulk-pack fish that were sold by the pound. Some of these items were sold from the frozen food case and the meat counter. These bulk-pack items were not included among the other frozen foods due to the varying prices and display methods. Where bulk-pack items were sold, the space they occupied has been deducted from the total frozen food display space reported for each store.

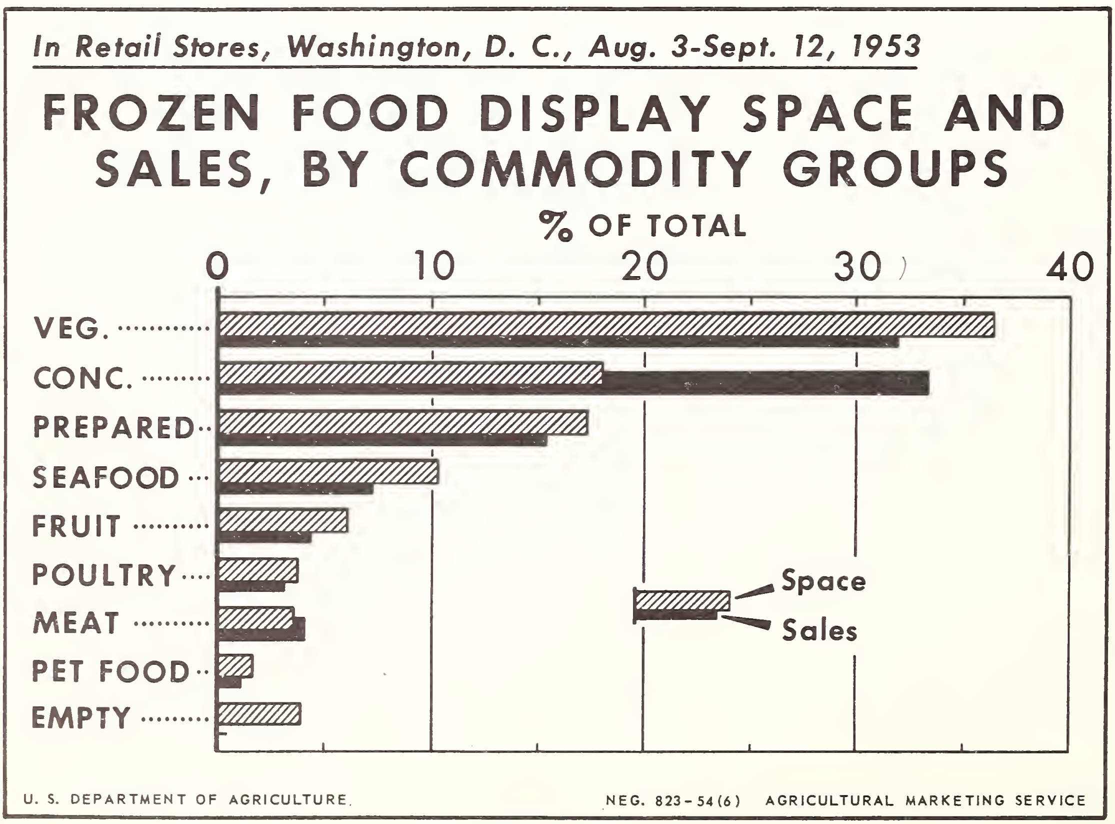


Figure 2.

Vegetables occupied the greatest portion of display space--36.3 percent--and accounted for 31.9 percent of total sales (fig. 2). Concentrates occupying only 18.0 percent of the display space accounted for 33.3 percent of sales. This indicates the importance of these high value, rapid turnover items. Prepared foods were third in both display space and sales at 17.2 and 15.4 percent of their respective totals. Seafood occupied 10.2 percent of the space and accounted for 7.2 percent of sales. Fruit had 6.0 percent of the space and 4.3 percent of sales, poultry 3.6 percent of space and 3.0 percent of sales, meat 3.4 percent of space and 4.0 percent of sales, and pet food 1.5 percent of space and 0.9 percent of sales. There was some empty display space in nearly every store, averaging 3.8 percent for all stores.

Table 3. - Percentage distribution of frozen food display space and sales value in retail stores, by commodity groups, Washington, D. C., Aug. 3-Sept. 12, 1953

Store group average	Vegetables		Concentrates		Prepared foods		Seafoods	
	Space	Sales	Space	Sales	Space	Sales	Space	Sales
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
Small.......	32.4	27.4	19.1	30.3	17.3	13.4	5.9	5.3
Medium.....	39.0	35.2	18.4	36.3	20.5	14.1	6.0	3.7
Large.......	36.2	31.8	17.7	33.1	16.2	15.7	12.2	7.7
All stores......	36.3	31.9	18.0	33.3	17.2	15.4	10.2	7.2

Store group average	Fruit		Poultry		Meat		Pet food		Empty
	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
Small.......	5.7	3.9	6.2	8.5	4.8	9.0	2.2	2.2	6.4
Medium.....	5.4	3.4	3.2	3.0	3.2	3.2	1.5	1.1	2.8
Large.......	6.3	4.4	3.3	2.7	3.2	3.8	1.3	.8	3.6
All stores......	6.0	4.3	3.6	3.0	3.4	4.0	1.5	.9	3.8

Vegetables occupied the largest amount of display space in all three size groups of stores (table 3). They accounted for around one-third of the total display space. In each case, vegetable sales ranked second in total sales value among the 8 categories of frozen foods.

Concentrates occupied about one-fifth of the total display space in each store group. Their sales ranked first in all store groups, accounting for roughly one-third of the total value of frozen food sales.

Prepared foods ranked third in the amount of display space occupied and in total sales value except in the medium-sized stores where they were second in amount of space occupied.

Seafood accounted for more than twice the proportion of total space in the large stores as in either the medium or small stores. Seafood sales were the smallest of any commodity group in relation to the average proportion of space devoted to them in all stores, although the ratio of percent of sales to percent of space was considerably better in the small-store group than in the others.

There was only slight variation among the three store groups in the proportions of space and sales accounted for by fruit.

Poultry was relatively more important in the small-store group, accounting for 6.2 percent of the space and 8.5 percent of the sales. This was about three times the percentage of sales and nearly twice the percentage of space accounted for by poultry in the medium and large stores.

Meat also was relatively more important in the small stores, occupying 4.8 percent of space and accounting for 9.0 percent of sales. It accounted for only 3.2 percent of sales in the medium stores and 3.8 percent in the large stores while occupying an average of 3.2 percent of the space in both store groups.

In the small stores, pet food accounted for 2.2 percent of sales from 2.2 percent of the space. It accounted for 1.1 percent of the sales from 1.5 percent of space in the medium stores, and 0.8 percent of sales from 1.3 percent of the space in the large stores.

Empty space varied considerably among individual stores, averaging 6.4 percent for the small store group, 2.8 percent for the medium stores, and 3.6 percent for the large stores. The occurrence of empty frozen food display space could not consistently be associated with lack of

storage, poor delivery schedules, jumbled displays, or any other one factor. Each store presented a different situation with respect to unused space.

Returns from frozen food display space may be measured in terms of sales per unit of space. Square inches are used as the unit of measure in this analysis as this proved most convenient for making comparisons among individual commodities (fig. 3).

Concentrates ranked first in sales per unit of space, with an all-store average of $1.46 per square inch (table 4). In the small-store group, however, meat brought a higher return per unit of space. Returns for concentrates averaged $0.43 per square inch in the small stores, $0.77 in the medium, and $1.87 in the large stores.

Meat sales brought the second highest returns per square inch of display space, averaging $0.93 for all stores, $0.51 in the small stores, $0.40 in the medium stores, and $1.19 in the large stores.

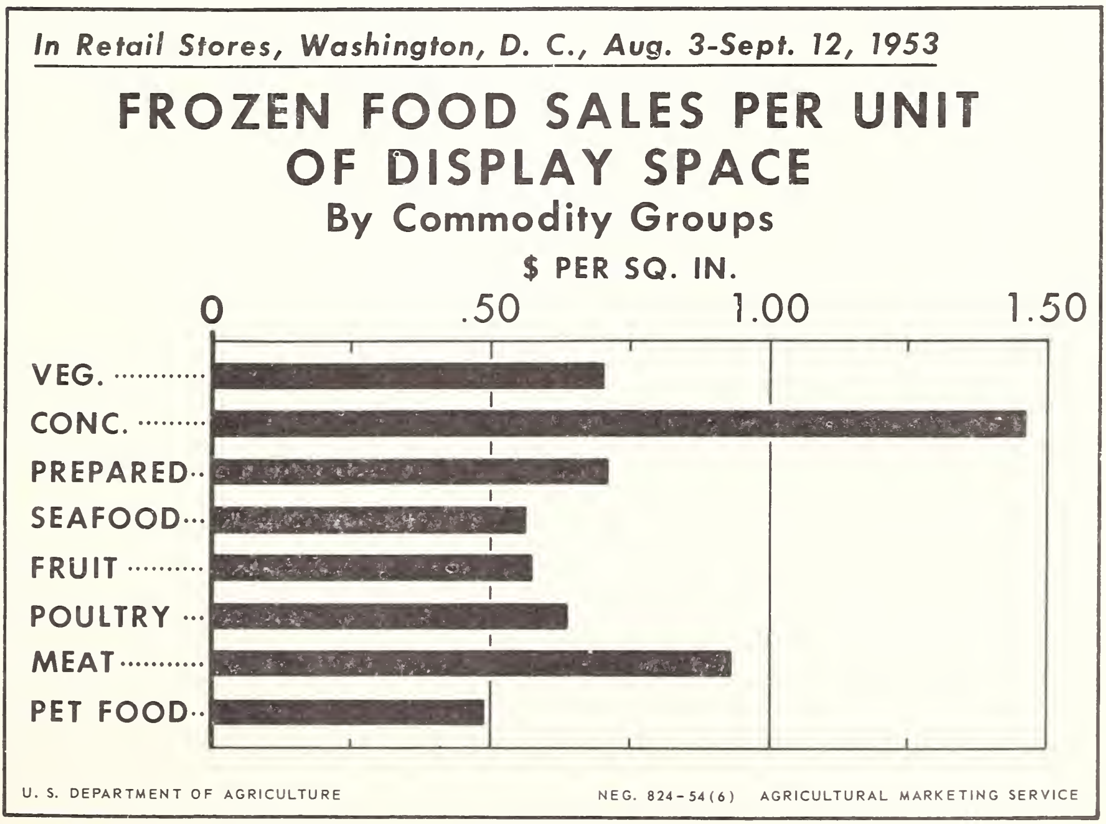


Figure 3.

Prepared foods, with all-store average sales of $0.71 per square inch, ranked third, having slightly higher sales per unit of space than vegetables. Sales averaged $0.21 per square inch in the small stores, $0.27 in the medium stores, and $0.97 in the large stores.

Vegetables ranked fourth in sales per unit of display space, with an all-store average return of $0.70 per square inch. Sales averaged $0.23 per square inch in the small stores, $0.35 in the medium stores, and $0.88 in the large stores.

Poultry, with an all-store average return of $0.64 per square inch, ranked fifth among the eight commodity groups. In this category, as in meats, the small stores received a higher return ($0.37 per square inch) than the medium stores ($0.36 per square inch). Returns averaged $0.82 per square inch in the large stores.

Frozen fruit, with an all-store average of $0.57, ranked sixth in sales per square inch of display space. Returns in the small and medium stores averaged $0.19 and $0.25 per square inch, respectively. In the large store group, fruit returned $0.71 per square inch.

Seafood returns were next to the lowest of any category, with an all-store average of $0.56 per square inch. Average returns were $0.24 per square inch in the small and medium stores, and $0.63 in the large stores.

Pet foods were lowest of any category in sales per unit of display space, averaging $0.49 per square inch for all stores. Small-store sales were $0.27 per square inch, medium-store sales $0.28, and large-store sales $0.63.

Table 4.- Average value of frozen food sales per square inch of display space by retail store groups and commodity groups, Washington, D. C., Aug. 3-Sept. 12, 1953

Store group average	Vegetables	Concentrates	Prepared foods	Seafood	Fruit	Poultry	Meat	Pet food	Total
	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.
Small..........	0.23	0.43	0.21	0.24	0.19	0.37	0.51	0.27	0.27
Medium.........	.35	.77	.27	.24	.25	.36	.40	.28	.39
Large..........	.88	1.87	.97	.63	.71	.82	1.19	.63	1.00
All stores.........	.70	1.46	.71	.56	.57	.64	.93	.49	.79

The 10 best sellers occupied 38.2 percent of the total frozen food display space and accounted for 58.4 percent of the total dollar sales (table 5). 3/ These items were orange juice, lima beans, lemonade, peas, broccoli, green beans, beef sandwich steaks, grape juice, spinach, and french-fried potatoes.

These 10 commodities accounted for 58.5 percent of the sales and 39.1 percent of the space in the large stores, 60.3 percent of the sales and 38.6 percent of the space in the medium stores, and 52.4 percent of the sales and 32.6 percent of the space in the small stores.

Display space occupied by the 10 best sellers ranged from 1.6 percent for grape juice to 7.3 percent for orange juice. Dollar sales of each commodity ranged from 2.3 percent of all sales for spinach to 21.2 percent for orange juice (table 5). Nine of the 10 commodities accounted for a larger proportion of sales than of display space. Spinach was the only exception, accounting for only 2.3 percent of sales while occupying an average of 3.4 percent of the space.

Relatively more display space was provided in the large and medium stores for each of these 10 commodities except beef sandwich steaks and grape juice.

The 10 leading commodities returned an all-store average of $1.21 per square inch of display space. Sales per square inch for the 10 commodities are shown in table 6. Small-store sales averaged $0.44 per square inch, medium-store sales $0.61, and the large-store sales $1.50. In the individual stores, average returns for the 10 items varied from a low of $0.28 per square inch to a high of $2.08 per square inch.

Frozen concentrated orange juice, which accounted for 63 percent of all concentrate sales, returned $0.78 per square inch in the small stores, $1.27 in the medium stores, and $2.83 in the large stores, for

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3/ These 10 commodities accounted for highest dollar sales in most stores. For example, orange juice sales were highest in 25 of the 27 stores, lima bean sales were second highest in more stores than any other commodity, and lemonade was third. The others were peas, broccoli, green beans, beef sandwich steaks, grape juice, spinach, and french-fried potatoes, in that order. The 10 best sellers were not determined on the basis of total sales value in all stores, as this method would obscure the importance of any best sellers in the small stores that were not equally important in the larger stores (see appendix table 8 for rank in aggregate sales).

Table 5. - Percentage distribution of display space and sales value of 10 leading frozen foods, Washington, D. C., Aug. 3-Sept. 12, 1953

Store group	Orange juice		Lima beans		Lemonade		Peas	
	Space	Sales	Space	Sales	Space	Sales	Space	Sales
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
Small.....	6.4	18.2	3.8	5.5	3.3	5.4	2.8	3.9
Medium...	7.4	24.0	5.5	7.0	3.7	5.8	3.6	5.3
Large.....	7.5	21.1	5.1	5.7	3.8	6.2	4.2	4.3
All stores....	7.3	21.2	5.0	5.8	3.7	6.1	3.9	4.4

Store group	Broccoli		Green beans		Beef sandwich steaks		Grape juice	
	Space	Sales	Space	Sales	Space	Sales	Space	Sales
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
Small.....	1.9	2.9	3.7	2.8	3.0	4.4	2.5	4.3
Medium...	3.0	4.3	5.5	3.4	2.0	2.3	1.6	2.2
Large.....	4.0	3.8	5.0	7.2	2.1	3.2	1.5	2.3
All stores....	3.6	3.8	4.9	6.7	2.2	3.2	1.6	2.4

Store group	Spinach		French-fried potatoes		Total	
	Space	Sales	Space	Sales	Space	Sales
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
Small.....	3.3	2.4	2.0	2.6	32.6	52.4
Medium...	4.0	3.2	2.3	2.7	38.6	60.3
Large.....	3.3	2.2	2.6	2.5	39.1	58.5
All stores....	3.4	2.3	2.5	2.6	38.2	58.4

Table 6.- Average sales value per square inch of display space for 10 leading frozen foods in retail stores, Washington, D. C., Aug. 3-Sept. 12, 1953

Store group	Orange juice	Lima beans	Lemonade	Peas	Broccoli	Green beans	Beef sandwich steaks	Grape juice	Spinach	French-fried potatoes
	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.
Small........	0.78	0.40	0.42	0.38	0.42	0.20	0.40	0.47	0.20	0.35
Medium.......	1.27	.49	.61	.57	.56	.24	.46	.55	.32	.47
Large........	2.83	1.11	1.64	1.02	.93	1.46	1.50	1.51	.67	.97
All stores.......	2.30	.92	1.31	.89	.84	1.08	1.14	1.14	.53	.82

an all-store average of \$2.30 per square inch (table 6). This represents an all-store average of \$9.20 per square foot of frozen concentrated orange juice display each shopping day. It reached a daily average of \$18.80 per square foot in one store. Orange juice was first in sales in each store group; in fact, it was first in all but two stores.

Lemonade ranked second in sales per square inch of display space with an all-store average return of \$1.31. Unusually hot weather occurred during about two of the six weeks in which data were being collected. The prominent position of lemonade sales is, no doubt, partly a result of the weather conditions.

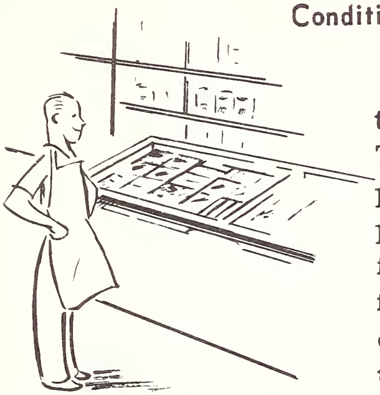
Beef sandwich steaks (which accounted for 79 percent of meat sales) and grape juice ranked third in sales per unit of space, each averaging \$1.14 per square inch for all stores.

French style and cut green beans brought an all-store average return of \$1.08 per square inch to place fifth in sales per unit of display space. Lima beans (including butter beans as well as fordhook and baby limas) returned \$0.92 per square inch, ranking sixth in sales per unit of display space for all stores.

Peas ranked seventh, with sales averaging \$0.89 per square inch of space, and broccoli ranked eighth, with average sales of \$0.84 per square inch.

French-fried potatoes were the only prepared food among the top 10, ranking ninth with average sales of \$0.82 per square inch.

Spinach, with average sales of only \$0.53 per square inch, ranked tenth, well below any of the other best selling commodities.



Condition of frozen food displays

Four factors were considered in classifying the condition of the displays in the sample stores. These were orderliness, price marking, frosted packages, and thawed or otherwise damaged packages. In order to obtain a measure of degree from a "yes or no" type of appraisal of these factors, separate observations were recorded for each of the eight commodity groups. Each store that had an orderly display, with adequate price marking, and no frosted packages or damaged packages in each of the 8 commodity groups was scored 32 as perfect.

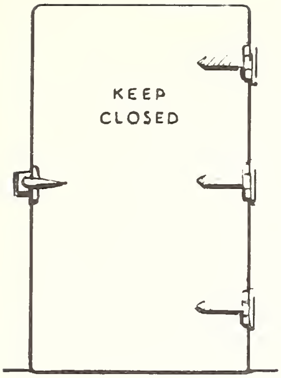
Ten of the 27 stores scored 32, three scored 31, one 30, one 28, one 23, one 21, two 19, one 17, one 16, one 10, three 8, and two 5. None of the large stores scored less than 30, two of the medium stores scored 32, and one of the small stores scored 31. Limitations such as type of facilities, as well as management practices, are reflected in these scores. Low scores in several of the smaller stores resulted in part from inadequate facilities. Such situations place a larger burden on the store manager in effectively displaying his frozen foods.

In attempting to evaluate the effect of condition of display upon frozen food sales, a multiple correlation was run, relating sales to (1) condition of frozen food display, (2) number of items displayed, (3) percent of unoccupied cabinet space, and (4) percent of total space allocated to the 10 best selling items. Slightly over half of the variation in sales could be explained by these factors. 4/ Practically all of the explained variation in frozen food sales found in the 4 factors tested was associated with condition of display.

4/ The regression equation was:

$$y = -1.86 - \underset{.002}{.00117x_1} - \underset{.016}{.0043x_2} + \underset{.008}{.0101x_3} + \underset{.006}{.0278x_4}$$

where y represents dollar sales from frozen foods; x_1 represents number of items on display; x_2 represents percent of unoccupied display space; x_3 represents percent of total display space allocated to the 10 best selling items; x_4 represents condition of frozen food display, and where the numbers below the coefficients of the x's are the standard errors of the respective coefficients. The multiple correlation coefficient was .753.



Facilities and buying practices

Frozen food display space in the sample stores consisted of 77 percent open, glass-front cases and 23 percent chest-type cases. All but one of the stores in the small group used chest-type display cases exclusively. Only two stores in the medium group and none in the large group were equipped entirely with chest-type cases. In the small-store group, 78 percent of the total display space was provided by chest-type cases. This figure dropped to an average of 35 percent in the medium stores and 10 percent in the large stores. The newer open, glass-front cases were used exclusively by 3 medium stores and 5 large stores. In most stores where both types were used, the chests were devoted to the display of frozen concentrates.

Differences in total frozen food holding capacity among store groups were much greater than differences in display space. Total frozen food holding capacity for each store includes the capacity of both display cases and other storage facilities when available. The small stores averaged 25 cubic feet of holding capacity, compared to 43 cubic feet for the medium stores and 301 cubic feet for the large stores (appendix table 17).

There were only two stores in the small group that had storage chests and three in the medium group, while every store in the large group had either chest or walk-in storage. Frozen food storage facilities were inadequate in some stores. Out-of-stock situations were observed a number of times during the six weeks. In some instances frozen foods were stored in meat lockers or other storage not intended to maintain temperatures low enough for frozen foods. The addition of storage would probably prove profitable in these cases. In some stores, however, the relatively poor displays resulted from lack of attention. In these stores, lack of storage facilities could not be considered a limitation.

The size of frozen food purchases of vegetables, concentrates, and other items was estimated for each of the 27 stores. Concentrates were the only group of items usually purchased in case lots by all stores. Vegetables and other items were usually purchased by small stores in quantities of less than a dozen packages at a time. Three of the eight medium stores made it a practice to purchase less than a dozen packages of an item at a time. Most of the stores in the large group made purchases in case lots.

Size of purchases, number of deliveries a week, and available storage facilities are related. Several of the medium and large stores with limited storage received daily deliveries and purchased in relatively small quantities. The small stores had fewer deliveries per week than many of the medium and large stores.

Prices of fresh, canned and frozen foods

A check of the prices of six fresh, frozen, and canned items was made during the week of August 24-29. 5/ The information presented in table 7 represents an approximation of the prices of equivalent amounts of the same quality for peas, lima beans, cut green beans, cut corn, spinach, and broccoli. 6/

5/ While it was not the purpose of this study to determine the effect which the relative prices of fresh, frozen, and canned vegetables had upon their relative sales, it seemed important to give recognition to the price relationship that prevailed during the period of this study. Unfortunately, the relative sales volume for the corresponding fresh and canned items could not be collected. Undoubtedly, customer purchases are affected by the commodity offered, the form in which it is offered (fresh, frozen, or canned), and the relative prices of these offerings.

6/ The following yields were used in reducing fresh weights to frozen equivalents, Green peas, 40 percent; lima beans, 40 percent; green beans, 90 percent; corn, 38 percent; spinach, 75 percent; and broccoli 61 percent. Yields for reducing canned weights to frozen equivalents were: Green peas 63.6 percent; lima beans, 63.7 percent; green beans, 64.2 percent; and spinach, 57 percent. Vacuum-packed whole kernel corn was considered equivalent in edible weight to frozen corn.

Table 7.- Average prices for equivalent quantities of fresh, canned, and frozen vegetables in retail stores, by commodity groups, Washington, D. C., Aug. 24-29, 1953

Item	Peas 10 oz.	Lima beans 10 oz.	Cut green beans 10 oz.	Cut corn 10 oz.	Spinach 14 oz.	Broccoli 10 oz.
	Cents	Cents	Cents	Cents	Cents	Cents
Frozen	21.4	29.7	24.7	23.3	22.0	29.0
Fresh	38.9	25.7	9.8	19.6	36.7	18.1
Canned	21.2	26.5	22.4	17.8	25.5	--

The price of frozen peas was considerably less than that of fresh peas and was comparable to the price of the canned product for an equivalent amount. The price of frozen spinach was lower than that of either canned or fresh spinach. Fresh lima beans, green beans, and broccoli sold at lower prices than either the canned or the frozen product. Whole kernel corn was the only canned item selling at a noticeably lower price than its fresh or frozen equivalent.

The six frozen and canned items (except broccoli, which is not usually canned) were available in nearly all the stores. However, many stores did not stock several of the fresh vegetables although they were in season and readily available. Less than one-third of the stores visited during the week stocked fresh peas, lima beans, spinach or broccoli.

Appendix

Appendix table 8.- Sales value, number of stores handling and number of brands of frozen foods in retail stores, Washington, D. C., Aug. 3-Sept. 12, 1953

Commodity	Total sales	Rank in total sales	Sales per sq. inch	Stores handling	Brands available
	Dollars	Number	Dollars	Number	Number
Asparagus	1,420.74	16	0.63	26	9
Beans, baby lima	1,517.07	14	.67	27	7
Beans, butter	285.10	59	.60	11	2
Beans, fordhook lima	4,351.17	6	1.09	27	9
Beans, green	7,055.66	2	1.08	27	13
Beans, wax	180.77	65	.28	17	4
Broccoli	3,994.54	7	.84	27	12
Brussel sprouts	1,259.15	17	.78	26	8
Cauliflower	1,004.90	22	.49	27	8
Collards	414.07	42	.37	25	7
Corn, cut	746.54	24	.42	27	9
Corn, on cob	153.80	73	.33	14	7
Kale	582.07	34	.38	27	10
Mixed vegetables	1,051.91	20	.54	27	11
Mustard greens	8.85	125	.27	2	1
Okra	653.55	30	.50	27	7
Peas, green	4,620.97	5	.89	27	13
Peas, blackeyed	335.62	50	.34	21	6
Peas and carrots	365.59	46	.35	21	6
Potatoes, diced	103.66	87	.17	12	2
Spinach	2,425.05	13	.53	27	14
Squash, sliced	55.88	100	.22	5	2
Succotash	744.18	25	.50	27	6
Turnip greens	373.47	45	.28	24	9
Apples	--	--	--	1	1
Blueberries	71.42	91	.25	12	2
Boysenberries	--	--	--	1	1
Fruit cup	20.24	116	.13	8	1
Grapefruit sections	2.80	139	.13	1	1
Melon balls	456.91	39	.72	13	4
Peaches	303.15	56	.27	26	6
Pineapple chunks	213.26	62	.23	22	2
Raspberries	567.98	35	.84	24	6
Rhubarb	213.38	61	.26	22	3
Strawberries	2,707.45	9	.80	27	14
Coffee	122.94	79	.28	15	1
Grape juice	2,515.33	12	1.14	27	5
Grapefruit juice	543.58	36	.40	22	4
Lemon juice	57.72	98	.26	7	2
Lemonade	6,490.58	3	1.31	27	16
Lime juice	19.00	117	.95	2	1
Limeade	982.61	23	.68	27	3
Orange juice	22,412.88	1	2.30	27	12
Orangeade	448.09	40	.60	14	3
Orange and grapefruit blend	641.36	31	.63	19	1
Pineapple juice	690.51	28	.49	25	1
Tangerine juice	198.64	64	.41	10	4

Appendix table 8.- Sales value, number of stores handling and number of brands of frozen foods in retail stores, Washington, D. C., Aug. 3-Sept. 12, 1953--Continued

Commodity	Total sales	Rank in total sales	Sales per sq. inch	Stores handling	Brands available
	Dollars	Number	Dollars	Number	Number
Cod	311.11	53	0.37	17	8
Crabs	55.08	101	.45	4	1
Flounder	595.26	32	.68	21	8
Frog legs	114.40	84	.38	4	1
Haddock	1,456.10	15	.74	26	11
Halibut	485.18	38	.54	15	7
Herring roe	--	--	--	1	1
Herring	13.71	122	.10	5	1
Lobster tails	419.77	41	.50	16	3
Mackerel	30.68	112	.21	2	1
Oysters	120.04	81	.40	10	5
Perch	1,180.16	18	.67	26	9
Rockfish	146.99	75	.75	5	2
Salmon	310.37	54	.37	16	4
Scallops	163.08	71	.24	19	8
Shrimp	714.19	26	.65	25	9
Sole	533.50	37	.61	17	8
Swordfish	166.89	70	.96	8	3
Trout, mountain	74.76	89	.98	4	2
Trout, sea	307.65	55	.51	6	2
Whiting	408.74	44	.62	8	3
Chicken, cut up	659.98	29	.45	21	7
Chicken, breasts	1,057.78	19	.99	25	8
Chicken, legs	352.21	49	.51	19	5
Chicken, livers	574.00	33	1.03	21	8
Chicken, thighs	362.21	47	.72	20	5
Chicken, thighs and legs	67.34	93	.20	10	3
Chicken, wings	34.14	111	.17	5	3
Squab	1.49	141	.50	1	1
Cheeseburger	40.79	108	.31	7	1
Hamburger	129.54	77	.49	10	6
Beef liver	6.30	130	.32	1	1
Steak, cubed	325.29	52	.72	7	2
Steak, sandwich	3,345.19	8	1.15	27	9
Steak, tenderloin	58.12	97	.49	3	1
Calf brains	--	--	--	1	1
Calf liver	6.75	129	.19	4	2
Calf sweetbreads	--	--	--	2	2
Ham steak	16.66	120	1.51	1	1
Pork chops	64.37	95	.59	3	2
Pork cutlets	--	--	--	1	1
Pork tenderloin	56.19	99	.32	4	3
Veal cutlets	179.79	66	.71	8	3

Appendix table 8.- Sales value, number of stores handling and number of brands of frozen foods in retail stores. Washington, D. C., Aug. 3-Sept. 12, 1953--Continued

Commodity	Total sales	Rank in total sales	Sales per sq. inch	Stores handling	Brands available
	Dollars	Number	Dollars	Number	Number
Onions, french-fried	129.14	78	0.30	15	1
Potatoes, french-fried	2,705.11	10	.82	27	12
Potatoes, pancakes	24.09	115	.46	2	1
Potatoes, puffs	49.47	103	.12	13	1
Potatoes, whipped	68.08	92	.30	9	2
Squash, cooked	168.44	69	.16	23	5
Sweet potatoes	42.81	107	.29	7	1
Cod	.38	144	.00	5	2
Codfish cakes	203.03	63	.43	10	2
Crab cakes	357.06	48	.52	20	3
Crab, deviled	177.97	68	.38	13	5
Crab, meat	7.12	127	.05	3	5
Fillets	4.68	134	.09	2	1
Fish cakes	3.56	137	.06	2	1
Fish sticks	13.78	121	.15	5	2
Flounder	26.23	114	.58	4	2
Haddock	302.77	57	.80	14	4
Herring	4.13	136	.14	1	1
Oysters	106.28	86	.19	16	6
Perch	47.83	105	.27	6	3
Rockfish fillets	72.05	90	.97	2	1
Scallops	297.00	58	.49	19	6
Seafood dinner	334.51	51	.48	16	3
Shrimp	2,595.40	11	1.21	27	12
Smelts	.78	143	.26	1	1
Chicken a la king	240.69	60	.45	19	4
Chicken croquettes	--	--	.00	2	2
Chicken, fried	179.73	67	.51	10	2
Chicken pie	5,500.67	4	2.64	26	8
Chicken turnover	5.71	132	.04	4	1
Turkey dinner	139.23	76	.57	4	1
Turkey pie	151.64	74	.61	8	2
Beef pie	702.36	27	.61	24	5
Steak dinner	117.31	83	.41	4	1
Beef patties and gravy	--	--	.00	1	1
Apple pie	114.10	85	.30	13	2
Apple turnover	16.78	119	.28	3	1
Blintz, blueberry	7.07	128	.11	3	2
Blintz, cheese	122.57	80	.41	11	3
Blintz, strawberry	6.11	131	.19	1	1

Appendix table 8.- Sales value, number of stores handling and number of brands of frozen foods in retail stores, Washington, D. C., Aug. 3-Sept. 12, 1953--Continued

Commodity	Total sales	Rank in total sales	Sales per sq. inch	Stores handling	Brands available
	Dollars	Number	Dollars	Number	Number
Blueberry muffins	4.98	133	0.10	1	2
Brownies	35.74	110	.18	7	3
Cherry pie	96.84	84	.25	13	2
Cherry turnover	3.24	138	.08	3	1
Strawberry shortcake	155.44	72	.28	16	3
Cheese cake	48.54	104	.74	3	1
Cloverleaf rolls	38.02	109	.13	9	1
Corn fritter	17.82	118	.28	2	1
Spoonbread	66.00	94	.24	6	1
Waffles	410.83	43	.33	25	3
Shredded coconut	4.60	135	.06	3	1
Hors d'oeuvres	--	--	.00	1	1
Pizza pie	46.38	106	.22	6	2
Ravioli	9.08	124	.19	2	1
Meat sauce	7.75	126	.97	1	1
Chow mein, chicken	63.87	96	.30	11	2
Chow mein, shrimp	52.99	102	.35	8	2
Chow mein, vegetable	26.29	113	.16	7	2
Egg rolls	119.57	82	.52	10	2
Fried rice	2.08	140	.06	2	2
Egg drop soup	1.47	142	.08	1	1
Wonton soup	9.09	123	.09	3	2
Chopped horsemeat	1,010.51	21	.49	27	5

Appendix table 9.- Average number of frozen foods on sale in retail stores by commodity groups, Washington, D. C., Aug. 3-Sept. 12, 1953

Group and store number	Vegetables	Fruit	Concentrates	Seafood	Poultry	Meat	Prepared foods	Pet food	All
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Small									
1	17	3	4	3	4	1	10	1	43
2	15	3	6	4	3	1	11	1	44
3	18	6	7	9	6	9	23	1	79
4	18	5	8	7	4	2	9	1	54
5	18	5	6	4	4	3	6	1	47
6	19	6	8	8	5	2	20	1	69
7	18	1	7	5	5	1	13	1	51
8	21	7	7	7	6	3	18	1	70
Average	18	4	6	6	5	3	14	1	57
Medium 9	19	1	4	0	1	1	9	1	36
10	22	3	6	4	0	1	10	1	47
11	21	8	11	11	6	3	30	1	91
12	19	6	10	5	5	3	13	1	62
13	21	7	10	10	5	4	27	1	85
14	20	6	11	9	4	2	24	1	77
15	20	7	7	10	3	4	27	1	79
16	20	5	10	8	4	4	33	1	85
Average	20	5	9	7	3	3	22	1	70
Large									
17	23	8	11	13	6	2	38	2	103
18	19	6	7	13	5	3	22	1	76
19	18	6	7	9	5	3	21	1	70
20	19	5	7	8	5	1	14	1	60
21	21	7	9	12	7	4	30	2	92
22	20	6	10	18	6	5	24	1	90
23	21	6	10	19	5	5	25	1	92
24	21	5	9	16	4	1	16	1	73
25	22	6	9	6	3	2	21	1	70
26	18	5	7	12	5	3	18	1	69
27	19	6	7	13	5	3	22	1	76
Average	20	6	8	13	5	3	23	1	79
Average, all stores	20	5	8	9	4	3	20	1	70

Appendix table 10.- Number of brands and value of sales per square inch of display space for selected frozen foods in retail stores, Washington, D. C., Aug. 3-Sept. 12, 1953

Store number	Orange juice		Green peas		Cut green beans		Beef sandwich steaks		Strawberries		French-fried potatoes		All commodity sales
	Brands	Sales	Brands	Sales	Brands	Sales	Brands	Sales	Brands	Sales	Brands	Sales	
	Number	Dollars	Number	Dollars	Number	Dollars	Number	Dollars	Number	Dollars	Number	Dollars	Dollars
1	2	0.42	2	0.28	2	0.15	1	0.08	2	0.09	2	0.35	0.23
2	2	.62	1	.35	1	.25	1	.57	1	.19	2	.32	.28
3	4	1.13	1	.35	1	.17	4	.59	3	.50	1	.68	.34
4	2	1.56	1	.70	2	.15	1	.26	3	.57	1	.32	.22
5	2	1.11	4	.53	3	.85	1	1.32	3	.39	3	.36	.78
6	3	1.06	2	.17	2	.23	3	.25	3	.07	2	.33	.18
7	3	1.68	1	.30	1	.19	4	.18	2	.17	1	.22	.22
8	5	.35	5	.35	5	.09	4	.13	2	.33	4	.39	.17
9	2	1.79	2	.41	2	.13	2	1.10	0	0	1	.19	.43
10	3	1.07	3	.47	3	.13	1	.88	3	.18	3	.26	.33
11	4	1.42	4	.33	4	.25	5	.25	5	.22	2	.47	.34
12	4	1.18	1	.71	1	.27	2	.17	2	.24	1	.24	.38
13	3	1.07	1	.69	1	.45	2	.83	4	.39	2	.66	.26
14	4	2.20	3	1.02	2	.47	3	1.03	3	.49	3	.97	.77
15	5	.64	5	.35	4	.08	3	.16	4	.21	3	.27	.25
16	2	.80	2	.38	3	.21	4	.59	3	.44	2	.60	.35
17	5	1.56	4	.67	4	1.75	4	.79	4	.80	4	.48	.69
18	3	4.31	2	1.37	2	.59	3	1.64	1	1.10	1	1.68	1.17
19	3	4.70	2	1.38	2	1.02	3	3.25	1	3.18	1	1.22	1.47
20	3	3.19	2	.56	1	.46	3	1.02	1	1.30	1	.68	.80
21	4	4.03	6	.75	4	1.97	3	1.12	4	.74	3	.87	.87
22	3	1.91	4	.75	3	1.61	3	1.08	4	.56	3	.90	.82
23	3	3.11	4	1.37	3	2.96	3	3.27	4	2.03	3	1.27	1.25
24	4	2.54	4	.70	3	1.72	2	2.64	3	.67	3	.78	.87
25	3	2.80	1	2.18	1	1.26	2	1.65	3	1.06	1	1.65	1.44
26	3	1.78	2	.64	1	.60	2	1.17	1	.76	1	.63	.80
27	3	2.54	2	1.82	2	.68	3	1.12	1	1.09	1	1.43	.94
Average	3.2	1.87	2.6	0.73	2.3	0.69	2.7	1.01	2.6	0.68	2.0	0.67	0.79

Appendix table 11.- Frozen food display space and value of sales in retail stores by commodity groups, Washington, D. C.
Aug. 3 -Sept. 12, 1953

Group and store number		Total		Vegetables		Concentrates		Prepared foods		Seafood		Fruit		Poultry		Meat		Pet food		Empty
		Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space
		Sq. in.	Dol.	Sq. in.	Dol.	Sq. in.	Dol.	Sq. in.	Dol.	Sq. in.	Dol.	Sq. in.	Dol.	Sq. in.	Dol.	Sq. in.	Dol.	Sq. in.	Dol.	Sq. in.
Small	1	1,233	278.04	442	116.15	247	56.93	152	43.61	64	16.83	66	7.96	136	30.16	38	3.15	32	3.25	56
	2	1,133	320.15	457	118.95	270	102.81	156	40.75	65	6.16	47	8.03	58	25.74	18	10.26	18	7.45	44
	3	2,463	834.75	492	89.48	317	132.68	656	176.46	156	75.05	146	42.28	146	77.61	382	231.57	52	9.62	115
	4	1,823	406.79	510	104.79	373	150.44	324	48.41	211	18.88	127	24.40	150	5.91	58	30.92	56	23.04	14
	5	1,343	1,049.72	485	328.23	327	249.35	143	89.29	96	21.90	136	40.72	61	193.89	39	81.09	44	45.25	12
	6	1,714	312.65	635	97.81	337	155.76	407	21.81	114	9.43	105	13.81	54	4.74	48	7.85	14	1.44	-
	7	2,088	453.28	445	67.95	499	203.77	383	81.85	85	38.62	60	10.48	218	28.56	87	16.05	72	6.00	239
	8	4,316	719.58	1,751	275.93	712	273.48	565	85.05	152	43.99	235	22.99	174	5.09	100	11.60	74	1.45	553
Average		2,014	546.87	652	149.91	385	165.65	348	73.40	118	28.86	115	21.33	125	46.46	96	49.06	45	12.19	148
Medium	9	2,355	1,004.19	1,460	445.40	470	463.57	265	73.80	-	-	-	-	-	-	10	10.98	86	10.44	64
	10	2,034	677.74	1,168	398.35	270	192.36	373	43.63	41	14.01	85	17.38	-	-	10	8.82	22	3.19	165
	11	2,580	889.09	999	308.44	394	296.04	491	162.25	228	30.61	210	51.72	120	20.74	67	12.33	41	6.96	30
	12	3,901	1,472.99	1,691	524.28	724	611.27	549	168.19	163	46.68	307	53.18	163	30.41	204	42.31	43	6.67	57
	13	4,167	1,064.22	1,066	368.65	749	354.73	1,190	126.68	446	64.04	245	44.24	259	23.32	174	82.56	-	-	38
	14	3,598	2,777.65	1,447	919.13	686	995.32	682	394.77	230	132.31	212	93.50	105	107.52	74	68.18	126	66.92	66
	15	3,505	889.95	1,323	345.10	574	274.93	789	116.61	242	36.61	195	43.39	90	39.99	122	18.32	20	15.00	150
	16	3,924	1,372.50	1,048	267.87	921	497.38	1,097	339.34	215	52.21	155	45.36	104	81.70	163	84.68	66	3.96	155
Average		3,258	1,268.54	1,272	445.90	598	460.70	667	176.16	224	53.78	201	49.82	140	50.61	103	41.02	58	16.16	91
Large	17	10,443	7,224.36	3,568	2,398.88	1,901	2,282.69	2,313	1,446.50	872	300.33	559	262.05	242	192.87	364	268.75	86	72.29	538
	18	7,331	8,551.11	2,162	1,895.10	1,243	3,022.88	1,375	1,281.38	1,259	1,068.04	433	324.60	362	340.35	380	559.01	89	59.75	28
	19	5,549	8,177.53	1,974	2,265.42	1,076	3,435.08	1,044	742.90	427	533.28	263	345.98	307	502.06	162	229.56	94	123.25	202
	20	4,316	3,439.34	1,892	968.37	589	1,491.90	587	361.09	447	207.94	159	116.10	273	106.26	150	152.82	102	34.86	117
	21	7,988	6,922.61	3,036	2,183.73	1,112	2,673.00	1,402	1,219.92	375	214.34	506	249.39	260	149.82	246	173.41	126	59.00	925
	22	10,059	8,205.14	3,728	2,983.97	1,870	2,349.75	1,414	1,100.07	1,397	751.88	869	482.69	300	200.85	281	248.99	126	86.94	74
	23	10,927	13,621.55	4,018	4,956.99	1,898	4,002.28	1,478	1,865.87	2,030	1,340.52	525	605.33	252	235.59	248	512.88	142	102.09	336
	24	7,528	6,555.65	3,375	2,509.68	1,063	1,833.32	855	976.03	779	451.68	529	250.83	220	153.22	122	321.66	91	59.23	494
	25	8,132	11,741.43	2,630	3,091.99	2,465	3,717.88	1,476	3,509.19	352	195.36	646	577.30	186	190.46	303	408.29	74	50.96	-
	26	7,503	5,970.43	2,716	2,223.45	1,010	1,418.51	1,063	752.17	1,273	947.24	379	177.43	245	198.03	217	208.10	73	45.50	527
	27	11,262	10,636.06	3,804	3,459.62	1,914	3,885.13	1,723	998.73	1,898	989.72	839	641.25	336	164.26	467	424.85	219	72.50	62
Average		8,276	8,276.84	2,991	2,630.65	1,467	2,737.49	1,339	1,295.80	1,010	636.39	519	366.63	271	221.25	267	318.94	111	69.67	330
Average, all stores		4,934	3,909.94	1,789	1,248.29	889	1,300.86	846	602.46	524	292.60	309	175.09	193	124.37	168	156.63	76	37.58	202

Appendix table 12.- Percentage distribution of frozen food space and sales value in retail stores by commodity groups, Washington, D. C., Aug. 3-Sept. 12, 1953

Group and store number	Vegetables		Concen-trates		Prepared foods		Seafood		Fruit		Poultry		Meat		Pet food		Empty
	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
Small																	
1	35.9	41.8	20.0	20.5	12.3	15.7	5.2	6.0	5.4	2.9	11.0	10.8	3.1	1.1	2.6	1.2	4.5
2	40.3	37.2	23.8	32.1	13.8	12.8	5.7	1.9	4.2	2.5	5.1	8.0	1.6	3.2	1.6	2.3	3.9
3	20.0	10.7	12.9	15.9	26.7	21.1	6.3	9.0	5.9	5.1	5.9	9.3	15.5	27.7	2.1	1.2	4.7
4	28.0	25.7	20.4	37.0	17.8	11.9	11.6	4.6	6.9	6.0	8.2	1.5	3.2	7.6	3.1	5.7	.8
5	36.1	31.3	24.4	23.7	10.6	8.5	7.2	2.1	10.1	3.9	4.5	18.5	2.9	7.7	3.3	4.3	.9
6	37.0	31.3	19.7	49.8	23.7	7.0	6.7	3.0	6.1	4.5	3.2	1.5	2.8	2.5	.8	.4	-
7	21.3	15.0	23.9	45.0	18.3	18.1	4.1	8.5	2.9	2.3	10.4	6.3	4.2	3.5	3.5	1.3	11.4
8	40.6	38.4	16.5	38.0	13.1	11.8	3.5	6.1	5.5	3.2	4.0	.7	2.3	1.6	1.7	.2	12.8
Average	32.4	27.4	19.1	30.3	17.3	13.4	5.9	5.3	5.7	3.9	6.2	8.5	4.8	9.0	2.2	2.2	6.4
Medium																	
9	62.0	44.2	20.0	46.0	11.3	7.3	-	-	-	-	-	-	.4	1.1	3.6	1.0	2.7
10	57.4	58.8	13.3	28.4	13.4	6.4	2.0	2.1	4.2	2.5	-	-	.5	1.3	1.1	.5	8.1
11	38.7	34.7	15.3	33.3	19.0	18.2	8.8	3.5	8.1	5.8	4.7	2.3	2.6	1.4	1.6	.8	1.2
12	43.3	34.9	18.5	41.4	14.1	11.4	4.2	3.2	7.9	3.6	4.2	2.1	5.2	2.9	1.1	.5	1.5
13	25.6	33.6	18.0	32.3	28.5	11.6	10.7	5.8	5.9	4.0	6.2	2.1	4.2	7.5	-	-	.9
14	39.4	33.1	19.1	35.8	18.9	14.2	6.4	4.8	5.9	3.4	2.9	3.9	2.1	2.4	3.5	2.4	1.8
15	37.7	38.8	16.4	30.9	22.5	13.1	6.9	4.1	5.5	4.9	2.6	4.5	3.5	2.0	.6	1.7	4.3
16	26.7	19.5	23.5	36.2	27.8	24.7	5.5	3.8	3.9	3.3	2.6	6.0	4.2	6.2	1.7	.3	4.0
Average	39.0	35.2	18.4	36.3	20.5	14.1	6.0	3.7	5.4	3.4	3.2	3.0	3.2	3.2	1.5	1.1	2.8
Large																	
17	34.2	33.2	18.2	31.6	22.1	20.0	8.3	4.2	5.4	3.6	2.3	2.7	3.5	3.7	.8	1.0	5.2
18	29.5	22.2	17.0	35.4	18.7	15.0	17.2	12.5	5.9	3.8	4.9	3.9	5.2	6.5	1.2	.7	.4
19	35.6	27.7	19.4	42.0	18.8	9.1	7.7	6.5	4.7	4.2	5.5	6.2	2.9	2.8	1.7	1.5	3.7
20	43.8	28.2	13.6	43.4	13.6	10.5	10.4	6.0	3.7	3.4	6.3	3.1	3.5	4.4	2.4	1.0	2.7
21	38.0	31.5	13.9	38.6	17.5	17.6	4.7	3.1	6.3	3.6	3.3	2.2	3.1	2.5	1.6	.9	11.6
22	37.1	36.4	18.6	28.6	14.1	13.4	13.9	9.2	8.6	5.9	3.0	2.4	2.8	3.0	1.2	1.1	.7
23	36.8	36.4	17.3	29.4	13.5	13.7	18.6	9.8	4.8	4.4	2.3	1.7	2.3	3.8	1.3	.8	3.1
24	44.8	38.3	14.1	28.0	11.4	14.9	10.4	6.9	7.0	3.8	2.9	2.3	1.6	4.9	1.2	.9	6.6
25	32.3	26.3	30.3	31.6	18.2	29.9	4.3	1.7	8.0	4.9	2.3	1.6	3.7	3.5	.9	.5	-
26	36.2	37.3	13.4	23.8	14.2	12.6	17.0	15.7	5.0	3.0	3.3	3.3	2.9	3.5	1.0	.8	7.0
27	33.8	32.5	17.0	36.5	15.3	9.4	16.9	9.3	7.4	6.0	3.0	1.6	4.1	4.0	1.9	.7	.6
Average	36.2	31.8	17.7	33.1	16.2	15.7	12.2	7.7	6.3	4.4	3.3	2.7	3.2	3.8	1.3	.8	3.6
Average all stores	36.3	31.9	18.0	33.3	17.2	15.4	10.2	7.2	6.0	4.3	3.6	3.0	3.4	4.0	1.5	.9	3.8

Appendix table 13.- Frozen food sales value per square inch of display space in retail stores by commodity groups, Washington, D. C., Aug. 3-Sept. 12, 1953

Group and store number		Vegetables	Fruit	Concentrates	Seafood	Poultry	Meat	Prepared foods	Pet food	All
		Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.
Small	1	0.26	0.12	0.23	0.26	0.22	0.08	0.29	0.10	0.23
	2	.26	.17	.38	.09	.44	.57	.26	.41	.28
	3	.18	.29	.42	.48	.53	.61	.27	.18	.34
	4	.21	.19	.40	.09	.04	.53	.15	.41	.22
	5	.68	.30	.76	.23	3.18	2.08	.62	1.03	.78
	6	.15	.13	.46	.08	.09	.16	.05	.10	.18
	7	.15	.17	.41	.45	.13	.18	.21	.08	.22
	8	.16	.10	.38	.29	.03	.12	.15	.02	.17
Average		.23	.19	.43	.24	.37	.51	.21	.27	.27
Medium	9	0.31	0	0	0	0	1.10	0.28	0.12	0.43
	10	.34	.20	.71	.34	0	.88	.16	.14	.33
	11	.31	.25	.75	.13	.17	.18	.33	.17	.34
	12	.30	.17	.84	.29	.19	.21	.31	.16	.38
	13	.35	.18	.47	.14	.09	.47	.11	0	.26
	14	.65	.44	1.45	.58	1.02	.92	.58	.53	.77
	15	.26	.22	.48	.15	.44	.15	.15	.75	.25
	16	.26	.29	.54	.24	.79	.52	.31	.60	.35
Average		.35	.25	.77	.24	.36	.40	.27	.28	.39
Large	17	0.67	0.47	1.20	0.34	0.80	0.74	0.63	0.84	0.69
	18	.88	.75	2.43	.85	.94	1.47	.93	.67	1.17
	19	1.15	1.32	3.19	1.25	1.64	1.42	.71	1.31	1.47
	20	.51	.73	2.53	.47	.39	1.02	.62	.34	.80
	21	.72	.49	2.40	.57	.58	.70	.87	.47	.87
	22	.80	.56	1.26	.54	.67	.89	.78	.69	.82
	23	1.23	1.15	2.11	.66	.93	2.07	1.26	.72	1.25
	24	.74	.47	1.72	.58	.70	2.64	1.14	.65	.87
	25	1.18	.89	1.51	.56	1.02	1.35	2.38	.69	1.44
	26	.82	.47	1.40	.74	.81	.96	.71	.62	.80
	27	.91	.76	2.03	.52	.49	.91	.58	.33	.94
Average		.88	.71	1.87	.63	.82	1.19	.97	.63	1.00
Average, all stores		.70	.57	1.46	.56	.64	.93	.71	.49	.79

Appendix table 14.- Display space and value of 10 leading frozen foods in retail stores, Washington, D. C., Aug. 3-Sept. 12, 1953

Group and store number		Orange juice		Lima beans		Lemonade		Green peas		Broccoli		Green beans		Beef sandwich steaks		Grape juice		Spinach		French-fried potatoes	
		Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales
		Sq. in.	Dol.	Sq. in.	Dol.	Sq. in.	Dol.	Sq. in.	Dol.	Sq. in.	Dol.	Sq. in.	Dol.	Sq. in.	Dol.	Sq. in.	Dol.	Sq. in.	Dol.	Sq. in.	Dol.
Small	1	72	30.36	46	24.42	97	13.86	29	8.11	29	1.22	47	7.02	38	3.15	18	6.50	47	11.91	32	11.09
	2	117	73.06	78	39.44	43	6.51	48	16.75	43	.34	42	10.66	18	10.26	33	9.43	44	12.74	30	9.68
	3	68	76.69	63	24.50	70	31.05	31	10.75	24	6.08	50	8.40	185	109.29	55	4.50	13	4.00	23	15.66
	4	50	78.06	59	12.40	50	62.16	31	21.84	32	24.15	65	9.87	28	7.26	50	1.50	52	4.48	29	9.24
	5	136	150.66	57	66.56	54	54.86	101	53.58	26	28.18	46	39.21	22	28.98	40	18.00	41	35.76	64	23.03
	6	107	113.86	83	18.88	57	20.88	73	12.60	35	15.27	74	16.66	25	6.59	25	12.00	44	11.34	18	5.98
	7	82	137.94	25	5.58	67	24.24	35	10.50	25	4.93	52	9.99	87	16.05	67	30.00	25	4.75	56	12.25
	8	396	137.55	196	49.33	88	20.62	103	35.84	89	34.91	227	20.63	76	10.13	114	107.75	264	21.02	64	25.22
Average		128	99.77	76	30.14	66	29.27	56	21.25	38	15.76	75	15.30	60	23.96	50	23.71	66	13.25	40	14.02
Medium	9	188	336.83	271	129.89	258	117.38	179	73.47	82	53.55	244	31.18	10	10.98	-	-	82	43.29	72	13.98
	10	93	99.54	172	100.01	89	41.28	84	39.07	111	20.07	153	20.02	10	8.82	40	20.25	71	34.01	84	22.15
	11	144	204.57	141	74.47	52	16.37	111	36.69	113	32.69	111	27.83	47	11.80	35	23.38	77	23.31	32	14.92
	12	316	374.11	261	97.84	51	96.36	116	82.08	102	60.00	284	76.41	144	24.23	47	39.00	264	50.60	96	23.40
	13	255	272.85	152	64.67	100	45.52	89	61.09	77	42.85	116	51.74	63	52.14	73	11.44	124	35.26	31	20.42
	14	322	708.64	172	137.66	123	105.49	173	176.34	121	157.56	214	100.23	49	50.48	38	48.16	173	94.01	114	110.16
	15	253	162.77	144	54.30	93	53.34	105	36.54	120	34.53	192	15.25	82	13.04	93	31.40	126	26.56	72	19.70
	16	361	288.67	130	50.39	201	113.40	86	32.43	64	41.00	131	27.33	104	61.86	80	49.25	114	20.94	90	54.03
Average		242	306.00	180	88.65	121	73.64	118	67.21	99	55.28	181	43.75	64	29.17	58	31.84	130	41.00	74	34.84
Large	17	725	1,133.24	396	334.41	500	497.69	462	309.94	376	274.66	461	804.88	317	250.23	188	241.20	323	179.37	396	190.82
	18	474	2,044.94	362	455.07	281	578.72	212	290.27	265	277.00	332	197.25	258	422.07	98	200.13	264	145.23	132	221.45
	19	507	2,382.08	357	514.79	312	732.68	303	419.54	316	319.79	377	383.26	49	159.44	68	156.87	160	141.87	143	174.58
	20	316	1,009.57	280	210.38	145	293.39	330	185.17	202	156.65	222	102.54	150	152.82	47	93.45	264	90.70	132	89.22
	21	434	1,748.52	259	328.71	258	473.53	403	304.07	414	287.79	348	684.87	140	156.30	70	258.75	343	134.31	231	200.14
	22	736	1,404.63	487	448.31	341	310.62	444	334.62	497	410.43	516	830.81	152	164.33	215	183.12	266	163.70	323	291.99
	23	800	2,486.70	581	725.74	500	905.13	392	535.49	465	513.30	598	1,770.75	149	487.37	200	327.42	293	289.13	346	438.12
	24	470	1,191.67	694	415.34	137	291.83	383	267.51	198	231.52	501	862.73	122	321.66	64	118.89	310	141.05	288	225.88
	25	771	2,160.00	383	510.17	464	588.76	217	472.08	226	394.69	317	398.65	220	362.09	246	212.68	259	319.62	122	201.00
	26	444	789.01	465	489.35	187	394.37	363	231.06	173	150.64	266	158.57	114	133.90	96	126.46	233	155.96	133	83.42
	27	1,107	2,816.36	407	770.73	322	600.54	309	563.54	555	409.74	576	388.92	281	314.15	97	183.80	254	230.13	138	197.58
Average		617	1,742.43	425	473.00	313	515.21	347	355.75	335	311.47	410	598.48	177	265.85	126	191.16	270	181.01	217	210.38
Average, all stores		361	830.11	249	227.90	183	240.39	193	171.15	177	147.95	243	261.32	109	124.05	84	96.74	168	89.82	122	100.19

Appendix table 15.- Percentage distribution of display space and sales value for 10 leading frozen foods in retail stores, Washington, D. C., Aug. 3-Sept. 12, 1953

Group and store number		Orange juice		Lima beans		Lemonade		Green peas		Broccoli		Green beans		Beef sandwich steaks		Grape juice		Spinach		French-fried potatoes		Total	
		Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales	Space	Sales
		Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
Small	1	15.5	10.9	3.5	8.8	7.5	5.0	2.2	2.9	2.2	4.4	3.6	2.5	2.9	1.1	1.4	2.3	3.6	4.3	2.4	4.0	36.9	46.3
	2	10.3	22.8	6.9	12.3	3.8	2.0	4.2	5.2	3.8	.1	3.7	3.3	1.6	3.2	2.9	3.0	3.9	4.0	2.6	3.0	43.8	59.0
	3	2.8	9.2	2.5	2.9	2.8	3.7	1.2	1.3	1.0	.7	2.0	1.0	7.5	13.1	2.2	.5	.5	.5	.9	1.9	23.6	3 .9
	4	2.7	19.2	3.2	3.0	2.7	15.3	1.7	5.4	1.7	5.9	3.5	2.4	1.5	1.8	2.7	.4	2.8	1.1	1.6	2.3	24.5	56.8
	5	9.9	14.3	4.1	6.3	3.9	5.2	7.4	5.1	1.9	2.7	3.3	3.7	1.6	2.8	2.9	1.7	3.0	3.4	4.7	2.2	43.7	47.5
	6	6.0	36.4	4.7	6.1	3.2	6.7	4.1	4.0	2.0	4.9	4.2	5.3	1.5	2.1	1.4	3.8	2.5	3.6	1.0	1.9	31.6	74.9
	7	3.9	30.4	1.2	1.2	3.2	5.4	1.7	2.3	1.2	1.1	2.5	2.2	4.2	3.5	3.2	6.6	1.2	1.1	2.7	2.7	25.0	56.5
	8	9.1	19.1	4.5	6.9	2.0	2.9	2.4	5.0	2.0	4.9	5.2	2.9	1.8	1.4	2.6	15.0	6.1	2.9	1.5	3.5	37.5	64.3
Average		6.4	18.2	3.8	5.5	3.3	5.4	2.8	3.9	1.9	2.9	3.7	2.8	3.0	4.4	2.5	4.3	3.3	2.4	2.0	2.6	32.6	52.4
Medium	9	8.0	33.4	11.5	12.9	11.0	11.7	7.6	7.3	3.5	5.3	10.4	3.1	.4	1.1	-	-	3.8	4.3	3.1	1.4	59.2	80.4
	10	4.6	14.7	8.5	14.8	4.4	6.1	4.1	5.8	5.5	3.0	7.5	3.0	.5	1.3	2.0	3.0	3.5	5.0	4.1	3.3	44.6	59.8
	11	5.5	23.0	5.4	8.4	2.0	1.9	4.2	4.1	4.3	3.7	4.2	3.1	1.8	1.3	1.3	2.6	2.9	2.6	1.2	1.7	33.4	52.4
	12	8.0	25.4	6.6	6.7	1.3	6.5	2.9	5.6	2.6	4.1	7.2	5.2	3.7	1.7	1.2	2.6	6.7	3.4	2.4	1.6	43.1	62.7
	13	5.9	24.9	3.5	5.9	2.3	4.2	2.1	5.6	1.8	3.9	2.7	4.7	1.5	4.7	1.7	1.0	2.9	3.2	.7	1.9	25.9	59.9
	14	8.7	25.5	4.6	5.0	3.3	3.8	4.7	6.3	3.3	5.7	5.8	3.6	1.3	1.8	1.0	1.7	4.7	3.4	3.1	4.0	41.7	60.8
	15	7.1	18.3	4.0	6.1	2.6	6.0	2.9	4.1	3.4	3.9	5.4	1.7	2.3	1.5	2.6	3.5	3.5	3.0	2.0	2.2	36.5	50.3
	16	9.2	21.0	3.3	3.7	5.1	8.3	2.2	2.4	1.6	3.0	3.3	2.0	2.6	4.5	2.0	3.6	2.9	1.5	2.3	3.9	34.7	53.9
Average		7.4	24.0	5.5	7.0	3.7	5.8	3.6	5.3	3.0	4.3	5.5	3.4	2.0	2.3	1.6	2.2	4.0	3.2	2.3	2.7	38.6	60.3
Large	17	6.8	15.7	3.7	4.6	4.7	6.9	4.4	4.3	3.5	3.8	4.3	11.1	3.0	3.5	1.8	3.3	3.0	2.5	3.7	2.6	39.7	58.4
	18	6.5	23.9	4.9	5.3	3.8	6.8	2.9	3.4	3.6	3.2	4.5	2.3	3.5	4.9	1.4	2.3	3.6	1.7	1.8	2.6	26.5	56.5
	19	9.2	29.1	6.4	6.3	5.6	9.0	5.5	5.1	5.7	3.9	6.8	4.7	.9	1.9	1.2	1.9	2.9	1.7	2.6	2.1	46.7	65.8
	20	7.3	29.4	6.5	6.1	3.3	8.5	7.6	5.4	4.7	4.6	5.1	3.0	3.5	4.4	1.1	2.7	6.1	2.6	3.1	2.6	48.4	69.3
	21	5.4	25.3	3.2	4.7	3.2	6.8	5.0	4.4	5.1	4.2	4.3	9.9	1.8	2.3	.9	3.7	4.3	1.9	2.9	2.9	36.3	66.1
	22	7.1	17.1	4.7	5.5	3.3	3.8	4.3	4.1	4.8	5.0	5.0	10.1	1.5	2.0	2.0	2.2	2.5	2.0	3.1	3.6	39.5	55.4
	23	6.9	18.3	5.0	5.3	4.3	6.6	3.4	3.9	4.0	3.8	5.2	13.0	1.3	3.6	1.7	2.4	2.5	2.1	3.0	3.2	39.6	62.2
	24	6.1	18.2	9.1	6.3	1.8	4.5	5.0	4.1	2.6	3.5	6.6	13.2	1.6	4.9	.8	1.8	4.1	2.2	3.8	3.4	42.1	62.1
	25	9.5	18.4	4.7	4.3	5.7	5.0	2.7	4.0	2.8	3.4	3.9	3.4	2.7	3.1	3.0	1.8	3.2	2.7	1.5	1.7	39.7	47.9
	26	5.9	13.2	6.2	8.2	2.5	6.6	4.8	3.9	2.3	2.5	3.5	2.7	1.5	2.3	1.3	2.1	3.1	2.6	1.8	1.4	33.0	45.4
	27	9.8	26.5	3.6	7.2	2.9	5.6	2.8	5.3	5.0	3.9	5.1	3.7	2.5	3.0	.8	1.7	2.3	2.2	1.2	1.9	35.9	60.9
Average		7.5	21.1	5.1	5.7	3.8	6.2	4.2	4.3	4.0	3.8	5.0	7.2	2.1	3.2	1.5	2.3	3.3	2.2	2.6	2.5	39.1	58.5
Average, all stores		7.3	21.2	5.0	5.8	3.7	6.1	3.9	4.4	3.6	3.8	4.9	6.7	2.2	3.2	1.6	2.4	3.4	2.3	2.5	2.6	38.2	58.4

Appendix table 16.- Sales value per square inch of display space for 10 leading frozen foods in retail stores, Washington, D. C., Aug. 3-Sept. 12, 1953

Group and store number		Orange juice	Lima beans	Lemon-ade	Peas	Broc-coli	Green beans	Beef sandwich steaks	Grape juice	Spin-ach	French-fried potatoes
		Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.
Small	1	0.42	0.53	0.14	0.28	0.42	0.15	0.08	0.36	0.25	0.35
	2	.62	.51	.15	.35	.01	.25	.57	.29	.29	.32
	3	1.13	.39	.44	.35	.25	.17	.59	.08	.31	.68
	4	1.56	.21	1.24	.70	.75	.15	.26	.03	.09	.32
	5	1.11	1.17	1.02	.53	1.08	.85	1.32	.45	.87	.36
	6	1.06	.23	.37	.17	.44	.23	.25	.48	.26	.33
	7	1.68	.22	.36	.30	.20	.19	.18	.45	.19	.22
	8	.35	.25	.23	.35	.39	.09	.13	.95	.08	.39
Average		.78	.40	.42	.38	.42	.20	.40	.47	.20	.35
Medium	9	1.79	0.48	0.45	0.41	0.65	0.13	1.10	0	0.49	0.19
	10	1.07	.58	.46	.47	.18	.13	.88	.51	.48	.26
	11	1.42	.53	.31	.33	.29	.25	.25	.67	.30	.47
	12	1.18	.37	1.89	.71	.59	.27	.17	.83	.19	.24
	13	1.07	.43	.46	.69	.56	.45	.83	.16	.28	.66
	14	2.20	.80	.86	1.02	1.30	.47	1.03	1.27	.54	.97
	15	.64	.38	.57	.35	.29	.08	.16	.34	.21	.27
	16	.80	.39	.56	.38	.64	.21	.59	.62	.18	.60
Average		1.27	.49	.61	.57	.56	.24	.46	.55	.32	.47
Large	17	1.56	0.84	1.00	0.67	0.73	1.75	0.79	1.28	0.56	0.48
	18	4.31	1.26	2.06	1.37	1.05	.59	1.64	2.04	.55	1.68
	19	4.70	1.44	2.35	1.38	1.01	1.02	3.25	2.31	.89	1.22
	20	3.19	.75	2.02	.56	.78	.46	1.02	1.99	.34	.68
	21	4.03	1.27	1.84	.75	.70	1.97	1.12	3.70	.39	.87
	22	1.91	.92	.91	.75	.83	1.61	1.08	.85	.62	.90
	23	3.11	1.25	1.81	1.37	1.10	2.96	3.27	1.64	.99	1.27
	24	2.54	.60	2.13	.70	1.17	1.72	2.64	1.86	.46	.78
	25	2.80	1.33	1.27	2.18	1.75	1.26	1.65	.86	1.23	1.65
	26	1.78	1.05	2.11	.64	.87	.60	1.17	1.32	.67	.63
	27	2.54	1.89	1.87	1.82	.74	.68	1.12	1.89	.91	1.43
Average		2.83	1.11	1.64	1.02	.93	1.46	1.50	1.51	.67	.97
Average, all stores		2.30	.92	1.31	.89	.84	1.08	1.14	1.14	.53	.82

Appendix table 17.- Holding capacity and type of frozen food storage in retail stores, Washington, D. C., Aug. 3-Sept. 12, 1953

Group and store number		Holding capacity	Type of storage
		Cubic feet	
Small	1	23	--
	2	18	--
	3	24	--
	4	21	--
	5	27	Chest
	6	24	--
	7	15	--
	8	48	Chest
Average		25	
Medium	9	29	Chest
	10	16	--
	11	39	--
	12	51	Chest
	13	68	Chest
	14	28	--
	15	59	--
	16	54	--
Average		43	
Large	17	121	Chest
	18	95	Chest
	19	434	Walkin
	20	55	Chest
	21	178	Walkin
	22	386	Walkin
	23	108	Chest
	24	87	Chest
	25	826	Walkin
	26	526	Walkin
	27	494	Walkin
Average		301	
Average, all stores		143	

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